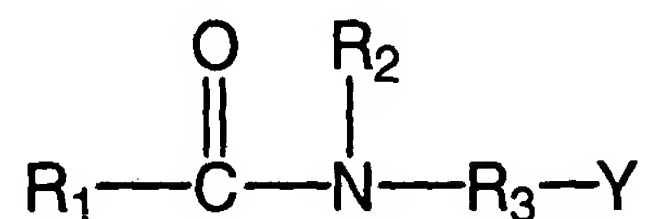


What is Claimed:

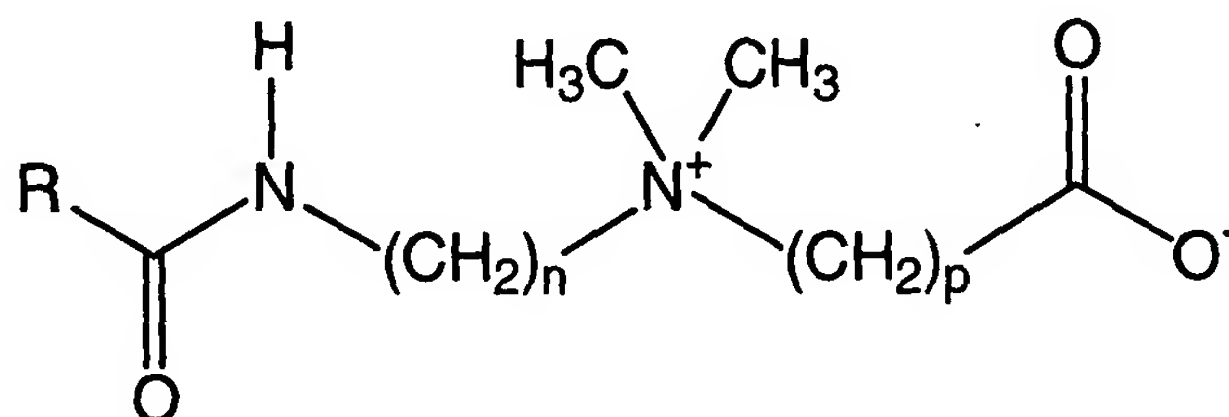
1. A method of treating a subterranean formation penetrated by a wellbore with an acid comprising the steps of:
 - a. injecting a viscoelastic energized diverter system, and
 - b. injecting the acid.
2. The method of claim 1 wherein the two steps are repeated in alternation.
3. The method of claim 1 wherein the formation is a carbonate.
4. The method of claim 1 wherein the acid comprises a gas.
5. The method of claim 1 wherein the acid is gelled.
6. The method of claim 5 wherein the acid further comprises a mutual solvent.
7. The method of claim 1 wherein the acid is emulsified.
8. The method of claim 1 wherein the acid is retarded.
9. The method of claim 1 wherein the acid is selected from the group consisting of hydrochloric acid, hydrofluoric acid, formic acid, acetic acid, citric acid, glycolic acid, malonic acid, tartaric acid, and mixtures thereof.
10. The method of claim 1 wherein the acid is selected from the group consisting of monoaminopolycarboxylic acids, polyaminopolycarboxylic acids, salts of monoaminopolycarboxylic acids, salts of polyaminopolycarboxylic acids, esters of monoaminopolycarboxylic acids, esters of polyaminopolycarboxylic acids, mixtures thereof, and mixtures thereof with an acid from the group consisting of hydrochloric acid, hydrofluoric acid, formic acid, acetic acid, citric acid, glycolic acid, malonic acid, tartaric acid, and mixtures thereof.
11. The method of claim 1 wherein the viscoelastic energized diverter system comprises a gas selected from the group consisting of nitrogen, carbon monoxide, carbon dioxide, a natural gas, or mixtures of one or more of these.
12. The method of claim 11 wherein the gas is carbon dioxide.
13. The method of claim 1 wherein the viscoelastic energized diverter system further comprises a foaming agent.

14. The method of claim 1 wherein the viscoelastic energized diverter system comprises a viscoelastic surfactant comprising



in which R_1 is a hydrocarbyl group that may be branched or straight chained, aromatic, aliphatic or olefinic and has from about 14 to about 26 carbon atoms and may contain an amine; R_2 is hydrogen or an alkyl group having from 1 to about 4 carbon atoms; R_3 is a hydrocarbyl group having from 1 to about 5 carbon atoms; and Y is an electron withdrawing group.

15. The method of claim 14 wherein the electron withdrawing group is selected from the group consisting of a quaternary amine and an amine oxide.
16. The method of claim 15 wherein the surfactant is a betaine having the structure:



in which R is a hydrocarbyl group that may be branched or straight chained, aromatic, aliphatic or olefinic and has from about 14 to about 26 carbon atoms and may contain an amine; $n =$ about 2 to about 4; and $p =$ 1 to about 5, and mixtures of these compounds.

17. The method of claim 16 wherein $\text{R} = \text{C}_{17}\text{H}_{33}$, $n = 3$, and $p = 1$.
18. The method of claim 16 wherein $\text{R} = \text{C}_{21}\text{H}_{41}$, $n = 3$, and $p = 1$.
19. The method of claim 1 wherein one or both of the steps is conducted above the fracturing pressure of the formation.
20. A method of treating a subterranean formation penetrated by a wellbore with a first acid comprising the steps of:

- a. injecting a viscoelastic energized diverter system comprising a viscoelastic surfactant, a second acid, and a gas, and
 - b. injecting the first acid.
- 21. The method of claim 20 wherein the two steps are repeated in alternation.
 - 22. The method of claim 20 wherein one or both of the steps is conducted above the fracturing pressure of the formation.
 - 23. The method of claim 20 wherein the gas is injected down tubing and the second acid and the viscoelastic energized diverter system are pumped in succession through an annulus between tubing and casing.
 - 24. The method of claim 23 further wherein the second acid and the viscoelastic energized diverter system further comprise a gas.
 - 25. The method of claim 23 wherein the tubing is perforated.
 - 26. The method of claim 23 wherein the tubing is coiled tubing.
 - 27. The method of claim 26 wherein the coiled tubing is moved into the wellbore during the treatment.
 - 28. The method of claim 20 wherein a mechanical isolator is employed.
 - 29. The method of claim 20 wherein the gas is injected through an annulus between tubing and casing and the second acid and the viscoelastic energized diverter system are pumped in succession down tubing.
 - 30. The method of claim 29 further wherein the second acid and the viscoelastic energized diverter system further comprise a gas.
 - 31. Method of claim 29 wherein the tubing is perforated.
 - 32. The method of claim 29 wherein the tubing is coiled tubing.
 - 33. The method of claim 32 wherein the coiled tubing is moved into the wellbore during the treatment.